

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 98-104
NPDES PERMIT NO. CA0006165

WASTE DISCHARGE REQUIREMENTS FOR:

RHODIA INC.
100 MOCOCO ROAD
MARTINEZ, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter the Board), finds that:

1. Rhodia Inc. (hereinafter the Discharger) submitted a Report of Waste Discharge and its revision dated January 9 and April 15, respectively, 1998 for the reissuance of National Pollutant Discharge Elimination System (NPDES) Permit No. CA0006165.
2. Rhone-Poulenc Basic Chemicals Co. (RPBCC), the named permittee in the previous Board Order Nos. 93-060 and 96-033, merged into Rhone-Poulenc Inc. (RPI), its parent company, in December 1992. Since then, RPBCC has retained its name for customer recognition purpose. On June 13, 1997, RPI notified the Regional Board of the change of business name from RPBCC to RPI.
3. On January 1, 1998, Rhodia was formed and, being spun off from RPI, took over the sulfuric acid manufacturing business at the site.

FACILITY DESCRIPTION

4. The Discharger owns and operates a sulfuric acid regeneration plant at 100 Mococo Road in Martinez, Contra Costa County (hereinafter the site). The site consists of approximately 110-acre areas on three separate parcels. To the immediate northeast off the site is a 12-acre vacant land owned by the State of California and administered through the State Lands Commission (SLC). The Discharger has a 10 feet to 15 feet easement on the SLC property for the routing of outfall E-001. Further north is Carquinez Strait. Shell Oil Martinez Refinery is on the west, and Peyton Slough is located to the east of the site. A large salt marsh covers most of the southern area off the site. **Attachment A** of this Order is the site location map.
5. Using primarily spent acids from the nearby petroleum refineries, and molten sulfur as raw material, the Discharger utilizes a contact process to manufacture approximately 300,000 tons per year of various strengths and grades of sulfuric acid and oleum. The major use of the sulfuric acid produced from the site is as an alkylation catalyst in gasoline manufacturing by local petroleum refineries.
6. The production process begins with the decomposition of spent sulfuric acid and molten sulfur in a high temperature (at 1800°F) industrial furnace. Flue gas rich in sulfur dioxide is

formed. The gas is cooled through a waste heat boiler and a wet gas scrubber, cleaned by multiple wet electrostatic precipitators, dried in a drying tower, and converted into sulfur trioxide in a converter unit. The sulfur trioxide then combines with water in an absorption tower to form sulfuric acid; a portion of the sulfuric acid product is supersaturated with sulfur trioxide to form oleum in the oleum tower. Prior to releasing to the atmosphere through a stack, the unabsorbed flue gas is cleaned in an ammonia scrubber where a fertilizer product, ammonium bisulfite, is formed.

7. The plant was built in 1969-1970 by Stauffer Chemical Company on land formerly occupied by Mountain Copper Company which operated a copper smelter at the site. Over the years, large piles of copper smelting slag and cinders were accumulated on the north and south areas of the site. Due to the heavy weight, these waste piles subsided into the soft Bay Mud. In response to Board Order No. 97-121, the Discharger has been extracting groundwater from the cinder/slag burial area to prevent leachate from entering Carquinez Strait. A Process Effluent Purification (PEP) plant was constructed in 1989 for groundwater treatment. The PEP plant uses sodium hydroxide to remove the high level of metals from the extracted groundwater. Based on past experience, the Discharger has identified nickel, zinc, and copper to be metals of concern in the PEP effluent. Occasionally cadmium were detected at slightly elevated levels. Two evaporative ponds for holding the metal-contaminated groundwater were closed under Board Order No. 91-166 in accordance with the requirements of Toxic Pits Cleanup Act.

PURPOSE OF ORDER

8. This NPDES Permit regulates the discharges of (i) treated effluent from the on-site treatment plant to Carquinez Strait, a water of the United States and the State, and (ii) untreated stormwater runoff to Peyton Slough, a shallow water body tributary to Carquinez Strait. Both Carquinez Strait and Peyton Slough and contiguous tributaries between these water bodies are considered the receiving waters for this Order. These discharges are currently governed by Waste Discharge Requirements (NPDES Permit) specified in the Board Order Nos. 93-060 and 96-033. The conditions of these two Orders were continued in effect past its expiration date, in accordance with NPDES regulation 40 CFR 122.6(d), by letter of the Executive Officer dated June 8, 1998. The U.S. Environmental Protection Agency (USEPA) and the Board have classified the discharges by Rhodia as a major discharge.

DISCHARGE DESCRIPTION

9. The description of wastewater and stormwater discharged from the site is based on information contained in the Report of Waste Discharge, recent self-monitoring reports, stormwater pollution prevention plan, and other relevant information. **Attachment B** is a water flow schematic for the plant. All sanitary waste is piped to leach fields located on various portions of the site.
 - a. Waste 001 consists of an average of 0.124 million gallons per day (MGD) of wastewater, with a potential maximum daily rate over 0.7 MGD in heavy rain periods. The waste influent consists of cooling tower blowdown, acidic process water, boiler blowdown, various scrubber and washdown waters, stormwater runoff associated with industrial activities, and the effluent from the PEP plant. In-plant recycle procedures have been implemented to minimize acid released to the wastewater treatment system. With the

exception of the PEP effluent, all wastewater streams are mixed in a 23,000-gallon fiberglass tank (T-28) where sodium hydroxide and aluminum sulfate are added for neutralization and flocculation. Overflow from T-28 is contained in a Surge Pond, from which the wastewater flows to a 13,000-gallon Neutralizing Tank (T-21) for further pH adjustment. The PEP effluent is also introduced into T-21 where the two streams mix. The combined effluent then enters a 630,000-gallon Settling Pond for final polishing. The final effluent from the Settling Pond is defined as the **treated Waste** for this Order. It is then discharged to Carquinez Strait, about 730 feet from the shoreline, via a deep water outfall E001 at a location of latitude 38°02'18" and longitude 122°07'01".

Based on the 1997 monitoring results, the final effluent 001 has pollutants characterized as follows:

<u>Constituents</u>	<u>long-term average</u>	<u>maximum daily</u>
Chemical Oxygen Demand (COD)	13.9 mg/l 7.23 kg/d	20.5 mg/l 17.63 kg/d
Total Suspended Solids (TSS)	2.9 mg/l 1.64 kg/d	7.4 mg/l 6.51 kg/d
Oil and Grease (O&G)	< 1 mg/l < 0.59 kg/d	1.1 mg/l 0.86 kg/d
pH value	6.8 (min)	8.8 (max)

Recent analytical data for the PEP effluent is summarized as follows:

	<u>minimum</u>	<u>average</u>	<u>maximum</u>
Cadmium, ppb	< 2	< 3	6
Copper, ppb	< 2	< 13	42
Nickel, ppb	< 4	< 11	22
Zinc, ppb	3	70	546

- b. Waste 002 consists of un-polluted stormwater runoff from the western highlands drain collection system on the site, from Caltrans' I-680 Benecia Bridge, and from an offsite property. It has been discharged through outfall E002 to Peyton Slough at a location of latitude 38°01'57" and longitude 122°06'41".

APPLICABLE PLANS, POLICIES, AND REGULATIONS

10. On June 21, 1995, the Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan), which was subsequently approved by the State Water Resources Control Board (State Board) and the Office of Administrative Law on July 20, and November 13, respectively, of 1995. The Basin Plan identifies beneficial uses and water quality objectives for surface waters in the region, as well as effluent limitations and discharge prohibitions intended to protect those uses. This Order implements the plans, policies, and provisions of the Board's Basin Plan.

11. The beneficial uses of Carquinez Strait and contiguous waters are:
 - a. Industrial Service Supply
 - b. Navigation
 - c. Water Contact Recreation
 - d. Non-Contact Recreation
 - e. Ocean Commercial and Sport Fishing
 - f. Wildlife Habitat
 - g. Preservation of Rare and Endangered Species
 - h. Fish Migration and Spawning
 - i. Estuarine Habitat
12. The reissuance of waste discharge requirements for these discharges is exempt from the provisions of Chapter 3 (commencing with Section 21100 of Division 13) of the Public Resources Code (CEQA) pursuant to section 13389 of the California Water Code.
13. Under 40 CFR 122.44, "Establishing Limitations, Standards, and other Permit Conditions", NPDES permits should also include toxic pollutant limitations if the Discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct.
14. Effluent limitations and toxic effluent standards established pursuant to Sections 301, 304, 306, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharges herein.
15. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) have not been promulgated by the USEPA for the type of discharge. Effluent limitations of this Order are based on the Basin Plan, other State Plans and policies, current plant performance and best professional judgment. The limitations are considered to be those attainable by BAT in the judgment of the Board, the national toxics rule (40 CFR 131.36), and the narrative water quality objectives contained in the Basin Plan.

REGIONAL MONITORING PROGRAM

16. On April 15, 1992, the Regional Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program (RMP) for San Francisco Bay. The RMP is designed to collect information from industrial and municipal discharges on concentrations of pollutants in water, sediment, and biota throughout the Bay. The Regional Board agreed to reduce the monitoring frequency of certain constituents discharged by Rhodia in return for its continuation of participating in the RMP.

EFFLUENT TOXICITY CONTROL PROGRAM

17. The Basin Plan adopts an Effluent Toxicity Control Program (ETCP) which requires certain dischargers, including Rhodia to monitor the toxicity of their effluent using critical life stage toxicity tests. The Regional Board implements the water quality objective for toxicity through the ETCP and by monitoring the toxicity of waters at or near discharge sites. The long term goal of the ETCP is to develop water quality based effluent limits using information about the acute and chronic toxicity of each discharge and resulting toxicity in

the receiving water.

18. The Discharger submitted an "Effluent Toxicity Characterization Program - Variability Phase Study Report" to the Regional Board on March 7, 1997, and identified that both *Crassostrea Gigas* (Pacific Oyster) and *Mytilus Edulis* (blue mussel) were consistently sensitive to its final effluent. Due to seasonal availability, the Discharger recommended that both invertebrate species be used as the alternate biological indicator for chronic toxicity compliance monitoring.

REASONABLE POTENTIAL ANALYSIS

19. NPDES regulations under 40 CFR 122.44(d)(1)(ii) require that when determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.
20. Reasonable potential (RP) has been evaluated for the toxic and priority pollutants of the discharge from the site. For the metal constituents, analytical data collected during the period from January 1994 through April 1998 were evaluated. For the organic pollutants including tributyltin and those measured by USEPA Methods 608, 610, 624, and 625, analytical data were taken from self-monitoring reports of 1994 through 1997. Different numbers of analytical data were used as a result of different monitoring frequencies for these pollutants.
21. In performing the RP analysis, pollutants reported as non-detected were treated to have concentrations at the detection limits. This assumption is consistent with the intent of the RP evaluation in which anticipated maximum in-stream effluent concentrations are compared with the appropriate narrative or numerical water quality standards to determine if the potential of excursions above these standards exist.
22. Because of effluent variability and the limited amount of test data available, there is some degree of uncertainty in determining an effluent's impact on receiving water. USEPA Technical Support Document for Water Quality-Based Toxics Control (TSD) of 1991 (EPA/505/2-90-001) addresses this issue by suggesting the use of a statistical approach. In this RP analysis, the anticipated maximum effluent concentration of each pollutant is calculated using a 99% confidence level and a 99% probability.
23. Basin Plan allows dilution for discharges to deep water; in this case Carquinez Strait is a deep receiving water for effluent E-001. Maximum in-stream concentration of each concerned pollutant is estimated considering the background concentration, dilution, and maximum effluent concentrations. The resulting in-stream concentration is then compared to the appropriate water quality objective contained in the Basin Plan. If there is no specific water quality objective available, the appropriate water quality criterion in USEPA National Toxics Rule (NTR) is used for comparison. Criteria specified in the proposed California Toxics Rule (CTR) are also reviewed if no applicable criteria are available in NTR. For the purpose of determining RP, a translator value of 1 is assumed for

the ratio of dissolved portion vs. total recoverable portion of each metal pollutant. This is consistent with the USEPA's "Metal Translator Guidance for Calculating A Total Recoverable Permit from a Dissolved Criterion" (EPA 823-B-96-007) of 1996.

24. The Table below shows the RP analysis results for the toxic and priority pollutants monitored at the site.

<i>Pollutants</i>	<i>No. of Sample analyzed</i>	<i>Does RP exist?</i>	<i>Preliminary WQ Limits (ppb)</i>	
			<i>MDL</i>	<i>AML</i>
Arsenic	17	N	--	--
Cadmium	53	N	--	--
Chromium	52	N	--	--
Copper	52	Y	55	30
Cyanide	18	N	--	--
Lead	52	Y	74	48
Mercury	19	N	--	--
Nickel	52	Y	53	22
Selenium	17	Y	84	37.8
Silver	17	N	--	--
Zinc	73	N	--	--
Phenol	14	N	--	--
PAHs	8	N	--	--
Organochlorine Pesticides	4	N	--	--
PCBs	4	N	--	--
Purgeable Organics	4	N	--	--
Acid Extractables	4	N	--	--
Base/Neutral Extractables	4	N	--	--
Tributyltin	4	N	--	--

25. The results of statistical evaluation indicate that copper, lead, nickel, and selenium exhibit reasonable potential of exceeding the applicable water quality objectives in the receiving water. Other toxic and priority pollutants including the remaining metals do not show reasonable potential. Using the TSD approach, preliminary water quality based limits were calculated for those pollutants having RP. MDL in the Table means Maximum Daily Limit; AML is Average Monthly Limit.

PROPOSED WATER QUALITY BASED LIMITATIONS

26. By comparing the calculated preliminary values mentioned in above Finding 25 with the corresponding limitations in the existing permit, the lower numerical values are adopted as the water quality based limitations.

NOTIFICATION

27. The Board notified the Discharger and interested agencies and persons of its intent to re-issue waste discharge requirements for the discharge, and has provided them with an opportunity for a public hearing and to submit their written views and recommendations.

28. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Prohibitions

1. The discharge of treated Waste 001 to Carquinez Strait at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 is prohibited.
2. The discharge of all toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, is prohibited.
3. Discharges of water, materials, or wastes other than those authorized by this NPDES permit, to a storm drain system or waters of the State are prohibited.

B. Effluent Limitations

1. Treated Waste 001 shall not have a pH less than 6.0 nor greater than 9.0.
2. Treated Waste 001 shall meet the following toxicity limitations:

2.1 Acute Toxicity:

The survival of test fish in a 96-hour static renewal bioassay of the effluent as discharged shall be an 11-sample median value of not less than 90 percent survival, and a 90th percentile value of not less than 70 percent. The 90th percentile is defined as follows:

“If one or more of the past ten or fewer samples show less than 70 percent survival, then survival of less than 70 percent of the next sample represents a violation of the effluent limitation”.

2.2 Chronic Toxicity:

The discharge is classified as a deep water discharge. The chronic toxicity effluent limitation is based on a dilution ratio of 10:1.

The effluent from the treatment plant as discharged, shall meet both of the following chronic toxicity limitations:

- a. an eleven-sample median value ¹ of 10 TUc, and
- b. a 90th percentile value ³ of 20 TUc ²

¹ A test sample showing chronic toxicity greater than 10 TUc represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show chronic toxicity greater than 10 TUc.

- 2 A TUC equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEC values. These terms and their usage in determining compliance with the limitations are defined in the **Attachment C** of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. The Executive Officer may specify two compliance species if test data indicate that there is alternating sensitivity between the two species. If two compliance test species are specified; compliance shall be based on the maximum TUC value for the discharge sample based on a comparison of TUC values obtained through concurrent testing of the two species.
 - 3 A test sample showing chronic toxicity greater than 20 TUC represents consistent toxicity and a violation of this limitation if one or more of the past ten or less samples shows toxicity greater than 20 TUC.
3. The discharge of treated Waste 001 containing constituents in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Daily Maximum</u>
Chemical Oxygen Demand	mg/l	--	46
	kg/d	--	42.5
Total Suspended Solids	mg/l	20	30
	kg/d	9.46	27.7
Oil and Grease	mg/l	--	5
	kg/l	--	4.6
Settleable Matter	ml/l-hr	0.1	0.2

The discharge of treated Waste 001 containing constituents in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>Daily Maximum</u>
Copper *	µg/l	37
Lead	µg/l	53
Nickel	µg/l	53
Selenium	µg/l	50**
Zinc	µg/l	800

- * The running annual total mass loading effluent limitation for copper is 3.45 kg/year. Running annual total shall be calculated by taking the arithmetic total of the daily mass loading value(s) of the current month and all of the previous eleven months' values.
- ** The daily limitation may be met as a four-day average at the discretion of the Discharger. If compliance is to be determined based on a four-day average, then separate 24-hour composite samples shall be obtained over four consecutive days, and the concentration results for each composite sample shall be reported, as well as the average of the four.

C. Receiving Water Limitations

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:
 - a. floating, suspended or deposited macroscopic particulate matter or foam;
 - b. alteration of temperature, turbidity or apparent color beyond present natural background levels;
 - c. visible, floating, suspended or deposited oil or other products of petroleum origin;
 - d. bottom deposits or aquatic growths; and
 - e. toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge shall not cause nuisance to, or adversely affect beneficial uses of the receiving water.
3. The discharge shall not cause the following limits to be exceeded in water of the State at any place within one foot of the water surface:
 - a. pH: the pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
 - b. Dissolved Oxygen: the concentration of dissolved oxygen shall not be less than 7.0 mg/l any time, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.
 - c. Sulfide: 0.1 mg/l maximum.
 - d. Unionized ammonia (as N): annual median 0.025 mg/l
maximum at any time 0.16 mg/l

4. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or State Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify the Order in accordance with such standards.

D. Provisions

1. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from the date of hearing provided the Regional Administrator of USEPA has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.
2. Pursuant to USEPA regulations 40 CFR 122.44, 122.62, and 124.5, this permit may be modified prior to the expiration date to include effluent limits for other toxic or pollutants if monitoring results of these pollutants indicate that either reasonable potentials of exceeding the corresponding site-specific water quality objectives or significant amount of these pollutants exist in the discharge resulting in a threat of impacts to the water quality or beneficial uses of San Francisco Bay exist.
3. This Order includes all items of the attached Self-Monitoring Program as adopted by the Board and as may be amended pursuant to USEPA regulations 40 CFR 122.62, 122.63, and 124.5.
4. This Order includes all items, except as mentioned otherwise, of the attached "Standard Provisions and Reporting Requirements" of August 1993.
5. The Discharger shall immediately comply with all limitations, prohibitions, and other provisions of this Order upon its adoption by the Board.
6. Neither the discharge nor its treatment shall create a nuisance or pollution as defined in Section 13050 of the California Water Code.
7. Compliance with Acute Toxicity Effluent Limitations
 - a. Compliance with the acute toxicity limitations in Effluent Limitations B.2.1 of this Order shall be evaluated by measuring the survival rate of both fish species of stickleback and rainbow trout in a static renewal 96-hour bioassay.
 - b. Each test consists of exposing ten fish of each species to undiluted effluent for 96 hours, and each fish represents a single sample. The two fish species shall be tested concurrently. Toxicity tests shall be performed according to protocols approved by the USEPA or equivalent alternatives acceptable to the Executive Officer.

8. Compliance with Chronic Toxicity Limitations

- a. Compliance with chronic toxicity in Effluent Limitation B.2.2 of this Order shall be evaluated by measuring the critical life stage toxicity tests for aquatic species as specified in the attached Self-Monitoring Report. **Attachment D** of this Order identifies the Critical Life Stage Toxicity Tests used in the chronic toxicity monitoring.
- b. If a violation of the chronic toxicity effluent limitation occurs, the Discharger shall conduct a chronic toxicity reduction evaluation (TRE), which shall initially involve a toxic identification evaluation (TIE). The TIE shall be in accordance with a work plan acceptable to the Executive Officer. The TIE shall be initiated within 30 days of the date of violation. The objective of the TIE shall be to identify the chemical or combination of chemicals that are causing the observed toxicity. The Discharger shall use currently available TIE methodologies. As toxic constituents are identified or characterized, the Discharger shall continue the TRE and take all reasonable steps to determine the source(s) of the toxic constituent(s) and evaluate alternative strategies for reducing or eliminating the constituent(s) from the discharge, and reduce toxicity to the required level. The Board recognizes that chronic toxicity may be episodic, and that identification of causes of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the Discharger's actions in identifying and reducing sources of consistent toxicity.
- c. Definitions of terms used in the chronic toxicity effluent limitations are included in **Attachment C** of this Order.

9. Compliance with Copper Mass Limitation

Compliance with the running annual total mass limitation of 3.45 kg/year for copper shall be demonstrated monthly upon adoption of this Order. A copper loading credit shall be applied to the treated Waste 001, as described below, provided that the intake water from the Contra Costa Canal exceeds 3.45 kg/year:

$$\text{Copper Loading Credit} = \text{CCWD annual copper load contributed to Discharger} - 3.45 \text{ kg/year}$$

*Conversion factor 1 lb = 0.4545 kg is used.

Intake copper loadings shall be monitored on the day(s) corresponding to the sampling of the treated waste 001, with appropriate time adjustment accounting for the hydraulic retention time through the plant.

10. Screening Phase Compliance Monitoring

The Discharger shall conduct screening phase compliance monitoring in accordance with a proposal submitted to and acceptable to the Executive Officer, as part of its ETCP. The proposal shall contain, at a minimum, the elements specified in **Attachment D** of this Order. The purpose of the screening is to determine the most sensitive test species for

subsequent compliance monitoring for chronic toxicity. Screening phase compliance monitoring shall be conducted under either of the following conditions:

- a. Subsequent to any significant change in the nature of the treatment plant effluent through changes in sources or treatment, except those changes resulting from reduction in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts; **or**
 - b. Prior to Permit reissuance, except when the Discharger is conducting a TIE/TRE, screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.
11. The Discharger shall submit to the Executive Officer for approval an updated Storm Water Pollution Prevention Plan (SWPPP) no later than December 31, 1998. Requirements of the SWPPP shall be pursuant to Section A of General Industrial Stormwater Permit (**Attachment G**). The Discharger shall implement the SWPPP within 30 days of approval by the Executive Officer. The SWPPP shall be reviewed annually; updated information shall be submitted within 30 days of revision.
 12. The Discharger shall submit to the Executive Officer for approval, a contingency plan as required by Board Resolution No. 74-10, no later than December 31, 1998. Upon approval, the contingency plan should be implemented within 30 days. The contingency plan shall be reviewed annually; updated information shall be submitted within 30 days of revision. Discharging pollutants in violation of this Order where the Discharger failed to develop and implement a current contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
 13. The Discharger shall submit no later than January 29, 1999 an updated Best Management Practices (BMP) program to the Executive Officer for approval. The BMP program shall be consistent with the requirements of USEPA regulation 40 CFR 125, Subpart K and the general guidance contained in the "NPDES Best Management Guidance Document", USEPA Report No. 600/9-79-045, December 1979 (revised June 1981). The BMP program acceptable to the executive Officer shall be implemented within 30 days of approval.
 14. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to USEPA regulation 40 CFR 122.41(k).
 15. In the event of any change in control or ownership of the site, business operation, or waste, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office. Requirements established in Standard Provisions E.4 of August 1993 shall be complied by the Discharger and the succeeding site owner or operator.
 16. Pursuant to USEPA regulation 40 CFR 122.42(a) the Discharger must notify the Board as soon as it knows or has reason to believe (1) that it has begun or expect to begin, use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that

exceed the specified limits in 40 CFR 122.42(a).

17. The Discharger shall consistently use the lowest possible detection limits commercially available to analyze all required chemical pollutants in its effluent discharge.
18. The requirements prescribed by this Order supersede the requirements specified by previous Order Nos. 93-060 and 96-033.
19. This Order expires on October 21, 2003, and the Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, not later than 180 days in advance of such date as application for the reissuance of waste discharge requirements.
20. Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 21, 1998.



Loretta K. Barsamian
Executive Officer

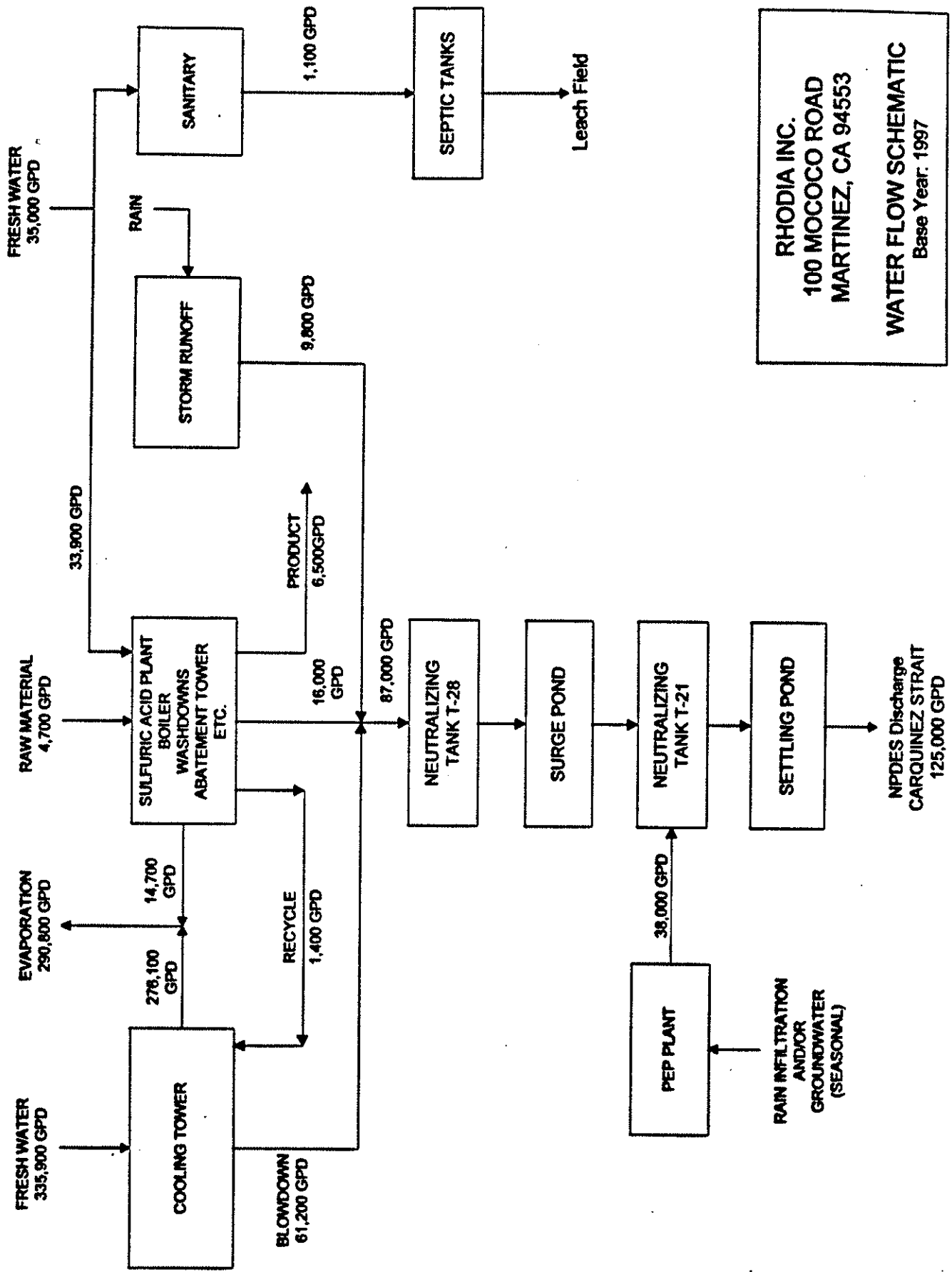
Attachments:

- A. Location Map
- B. Water Flow Schematic
- C. Chronic Toxicity Definition of Terms
- D. Chronic Toxicity Screening Phase Monitoring Requirements
- E. Self-Monitoring Program, Parts A and B
- F. Standard Provisions, and Reporting Requirements dated August 1993
- G. General Industrial Stormwater Permit - Section A



Attachment A Site Map

Rhodia Inc.
100 Mococo Road
Martinez, CA 94553



RHODIA INC.
100 MOCOCO ROAD
MARTINEZ, CA 94553
WATER FLOW SCHEMATIC
 Base Year: 1997

ATTACHMENT C

CHRONIC TOXICITY - DEFINITION OF TERMS

- A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25} . If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.
- B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25% of the test organisms.
- C. Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as EPA's Bootstrap Procedure.
- D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

ATTACHMENT D

CHRONIC TOXICITY - SCREENING PHASE REQUIREMENTS

- A. The discharger shall perform screening phase monitoring:**
- 1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts, or**
 - 2. Prior to Permit reissuance. Screening phase monitoring data shall be included in the NPDES Permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.**
- B. Design of the screening phase shall, at a minimum, consist of the following elements:**
- 1. Use of test species specified in Tables 1 and 2 (attached), and use of the protocols referenced in those tables, or as approved by the Executive Officer;**
 - 2. Two stages:**
 - a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Table 3 (attached); and**
 - b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.**
 - 3. Appropriate controls; and,**
 - 4. Concurrent reference toxicant tests.**

TABLE 1

CRITICAL LIFE STAGE TOXICITY TESTS FOR ESTUARINE WATERS

SPECIES	(Scientific name)	EFFECT	TEST DURATION	REFERENCE
alga	(<u>Skeletonema costatum</u>) (<u>Thalassiosira pseudonana</u>)	growth rate	4 days	1
red alga	(<u>Champia parvula</u>)	number of cystocarps	7-9 days	5
Giant kelp	(<u>Macrocystis pyrifera</u>)	percent germination; germ tube length	48 hours	3
abalone	(<u>Haliotis rufescens</u>)	abnormal shell development	48 hours	3
oyster mussel	(<u>Crassostrea gigas</u>) (<u>Mytilus edulis</u>)	{abnormal shell development; {percent survival	48 hours	2
Echinoderms (urchins - (sand dollar -	<u>Strongylocentrotus purpuratus</u> , <u>S. franciscanus</u> ; <u>Dendraster excentricus</u>)	percent fertilization	1 hour	4
shrimp	(<u>Mysidopsis bahia</u>)	percent survival; growth; fecundity	7 days	5
silversides	(<u>Menidia beryllina</u>)	larval growth rate; percent survival	7 days	5

TOXICITY TEST REFERENCES

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for conducting static 96-hour toxicity tests with microalgae. Procedure E 1218-90. ASTM Philadelphia, PA.
2. American Society for Testing Materials (ASTM). 1989. Standard Practice for conducting static acute toxicity tests with larvae of four species of bivalve molluscs. Procedure E 724-89. ASTM, Philadelphia, PA.
3. Anderson, S.B. J.W. Hunt, S.L. Turpen, A.R. Coulon, M. Martin, D.L. McKeown, and F.H. Palmer. 1990. Procedures manual for conducting toxicity tests developed by the marine bioassay project. California State Water Resources Control Board, Sacramento.
4. Dinnei, P.J., J. Link, and Q. Stober. 1987. Improved methodology for sea urchin sperm cell bioassay for marine waters. Archives of Environmental Contamination and Toxicology 16:23-32. and S.L. Anderson. September 1, 1989. Technical Memorandum. San Francisco Bay Regional Water Quality Control Board, Oakland, CA.
5. Weber, C.I., W.B. Homing, H. D.J. Kim, T.W. Nafshel, P.A. Lewis, E.L. Robinson, J. Menkedick, and F. Kessler (eds.). 1988. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to marine and estuarine organisms. EPA-600/4-87/028. National Technical Information Service, Springfield, VA.

TABLE 2
CRITICAL LIFE STAGE TOXICITY TESTS FOR FRESH WATERS

SPECIES	(Scientific name)	EFFECT	TEST DURATION	REFERENCE
fathead minnow	<u>(Pimephales promelas)</u>	survival; growth rate	7 days	6
water flea	<u>(Ceriodaphnia dubia)</u>	survival; number of young	7 days	6
alga	<u>(Selenastrum capricornutum)</u>	cell division rate	4 days	6

TOXICITY TEST REFERENCE

6. Horning, W.B. and C.I. Weber (eds.). 1989. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms. Second edition. U.S. EPA Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-89/001.

TABLE 3

TOXICITY TEST REQUIREMENTS FOR STAGE ONE SCREENING PHASE

REQUIREMENTS	RECEIVING WATER CHARACTERISTICS		
	DISCHARGES TO COAST	DISCHARGES TO SAN FRANCISCO BAY‡	
	Ocean	Marine	Freshwater
Taxonomic Diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type			
Freshwater†	0	1 or 2	3
Marine	4	3 or 4	0
Total number of tests	4	5	3

† The fresh water species may be substituted with marine species if:

- 1) The salinity of the effluent is above 5 parts per thousand (ppt) greater than 75% of the time, or
- 2) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

‡ Marine refers to receiving water salinities greater than 5 ppt at least 75% of the time during a normal water year.

Fresh refers to receiving water with salinities less than 5 ppt at least 75% of the time during a normal water year.

Attachment G

Section A: GENERAL INDUSTRIAL STORMWATER PERMIT

1. A stormwater pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this general permit. The SWPPP shall be designed to comply with BAT/BCT and be certified in accordance with the signatory requirements of Standard Provision C.9. The SWPPP shall be retained onsite and made available upon request of a representative of the Regional Water Board and/or local stormwater management agency (local agency) which receives the stormwater discharge.
2. The Regional Water Board and/or local agency may notify the discharger when the SWPPP does not meet one or more of the minimum requirements of this Section. Within 30 days of notice, the discharger shall submit a time schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the changes. After making the required changes, the discharger shall provide written certification that the changes have been made.
3. The discharger shall amend the SWPPP whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to surface water, ground waters, or the local agency's storm drain system. The SWPPP should also be amended if it is in violation of any conditions of this general permit, or has not achieved the general objectives of controlling pollutants in stormwater discharges.
4. The SWPPP shall provide a description of potential sources which may be expected to add significant quantities of pollutants to stormwater discharges, or which may result in non-stormwater discharges from the facility. The SWPPP shall include, at a minimum, the following items:
 - a. A map extending approximately one-quarter mile beyond the property boundaries of the facility, showing: the facility, general topography surface water bodies (including known springs and wells), and the discharge point where the facility's stormwater discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.
 - b. A site map showing:
 - i. The stormwater conveyance and discharge structures;
 - ii. An outline of the stormwater drainage areas for each stormwater discharge point;
 - iii. Paved areas and buildings;
 - iv. Areas of pollutant contact, actual or potential;
 - v. Location of existing stormwater structural control measures (i.e., berms, coverings, etc.);
 - vi. Surface water locations;
 - vii. Areas of existing and potential soil erosion; and
 - viii. Vehicle service areas.
 - c. A narrative description of the following:

- i. Significant materials that have been treated, stored, disposed, spilled, or leaked in significant quantities in stormwater discharge after November 19, 1988;
 - ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with stormwater discharge;
 - iii. Material loading, unloading, and access areas;
 - iv. Existing structural and non-structural control measures (if any) to reduce pollutants in stormwater discharge;
 - v. Industrial stormwater discharge treatment facilities (if any);
 - vi. Methods of on-site storage and disposal of significant materials; and
 - vii. Outdoor storage, manufacturing, and processing activities including activities that generate significant quantities of dust or particulates.
- d. A list of pollutants that are likely to be present in stormwater discharge in significant quantities, and an estimate of the annual quantities of these pollutants in stormwater discharge.
 - e. An estimate of the size of the facility (in acres or square feet), and the percent of the facility that has impervious areas (i.e. pavement, buildings, etc.).
 - f. A list of significant spills or leaks of toxic or hazardous pollutants to stormwater that have occurred after November 19, 1988. This shall include:
 - I. Toxic chemicals (listed in 40 CFR Part 372) that have been discharged to stormwater as reported on USEPA Form R.
 - II. Oil or hazardous substances in excess of reportable quantities (see 40 CFR Part 110, 117, or 302).
 - g. A summary of existing sampling data (if any) describing pollutants in stormwater discharge.
3. The SWPPP shall describe the stormwater management controls appropriate for the facility. The appropriate controls shall reflect identified potential sources of pollutants at the facility. The description of the stormwater management controls shall include:
- a. Stormwater Pollution Prevention Personnel. Identify specific individuals (and job titles) who are responsible for developing, implementing, and revising the SWPPP.
 - b. Preventive Maintenance. Preventive maintenance involves inspection and maintenance of stormwater conveyance system devices (i.e., oil/water separators, catch basins, etc.) and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to stormwater.
 - c. Good Housekeeping. Good housekeeping requires the maintenance of clean, orderly facility areas that discharge stormwater. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the stormwater conveyance system.
 - d. Spill Prevention and Response. Identification of areas where significant materials can

spill into or otherwise enter the stormwater conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, and clean-up equipment and procedures for spills of significant materials shall be established.

- e. Stormwater Management Practices. Stormwater management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting stormwater into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants to stormwater discharges in significant quantities, additional stormwater management practices to remove pollutants from stormwater discharge shall be implemented.
 - f. Erosion and Sediment Controls. The SWPPP shall identify measures to reduce sediment in stormwater discharges.
 - g. Employee Training. Employee training programs shall inform all personnel responsible for implementing the SWPPP. Training should address spill response, good housekeeping, and material management practices. Periodic dates for training should be identified.
 - h. Inspections. All inspections, visual observations and sampling as required by Section B, shall be done by trained personnel. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to these activities.
6. Non-stormwater discharges to stormwater conveyance systems shall be eliminated prior to implementation of this SWPPP. The SWPPP shall include a certification that non-stormwater discharges have been eliminated and a description of any tests for the presence of non-stormwater discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Such certification may not always be feasible if the discharger a) must make significant structural changes to eliminate the discharge of non-stormwater discharges to the industrial stormwater conveyance system, or b) has applied for, but not yet received, and NPDES general permit for the non-stormwater discharges. In such cases, the discharger must notify the appropriate Regional Water Board prior to implementation of the SWPPP that non-stormwater discharges cannot be eliminated. The notification shall include justification for a time extension and a schedule, subject to modification by the Regional Water Board, indicating when non-stormwater discharges will be eliminated. In no case shall the elimination of non-stormwater discharges exceed three years from the NOI submittal date.
 7. The SWPPP may incorporate, by reference, the appropriate elements of other program requirements (i.e., Spill Prevention Control and Countermeasures (SPCC) plans under Section 311 of the CWA, Best Management Programs under 40 CFR 125.100, etc.).
 8. The SWPPP is considered a report that shall be available to the public under Section 308(b) of the CWA.
 9. The SWPPP shall include the signature and title of the person responsible for preparation of the SWPPP, and include the date of initial preparation and each amendment, thereto.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

RHODIA INC.
(FORMERLY d.b.a. RHONE-POULENC BASIC CHEMICALS CO.)
MARTINEZ PLANT
MARTINEZ, CONTRA COSTA COUNTY

NPDES NO. CA0006165

ORDER NO. 98-104

CONSISTS OF

PART A (dated August 1993)

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

<u>Station</u>	<u>Description</u>
I-001	At any point at which all process associated waste streams are present, prior to the treatment facility.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the 001 waste stream from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present such that the sample is representative of the treated wastewater effluent.
E-002	At any point in the 002 waste stream from the Peyton Slough discharge point between the point of discharge and the point at which all waste tributary to that outfall is present, such that the sample is representative of the stormwater effluent.

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-001	At a point in Carquinez Straits, 730 feet from the shoreline above the deep water diffuser.

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 through P-"n"	Located along the periphery of the treatment facilities at equidistant intervals, not to exceed 200 feet. (A clear and legible sketch showing the location of these stations will accompany each report).

E. RAINFALL

<u>Station</u>	<u>Description</u>
R-1	The nearest official recording National Weather Service rainfall station or other station acceptable to the Executive Officer.

II. CHRONIC TOXICITY MONITORING REQUIREMENT

- A. Test Species and Frequency: The Discharger shall collect 24-hour composite samples at E-001 on consecutive days for critical life stage toxicity testing as indicated below:

<u>Test Species</u>	<u>Frequency</u>
Crassostrea Giga	Once every six months
Mytilus Edulis ¹	Once every six months

¹ Mytilus Edulis shall be used for chronic toxicity test only when Crassostrea Giga is not available.

- B. Conditions for Accelerated Monitoring: The Discharger shall accelerate the frequency of monitoring to monthly (or as otherwise specified by the Executive Officer) when there is an exceedance of either of the following conditions:

1. three sample median value of 10 TUc, or
2. single sample maximum value of 20 TUc.

- C. Methodology: Sample collection, handling, and preservation shall be in accordance with USEPA protocols. The test methodology used shall be in accordance with the references cited in the Permit, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

III. CHRONIC TOXICITY REPORTING REQUIREMENTS

- A. Routine Reporting: Toxicity test results for the current reporting period shall include at a minimum, for each test:

1. sample date(s)
2. test initiation date
3. test species
4. end point values for each dilution (e.g. number of young, growth rate, percent survival)
5. NOEC value(s) in percent effluent
6. IC15, IC25, IC40, and IC50 values (or EC15, EC25... etc.) in percent effluent
7. TUc values (100/NOEC, 100/IC25, and 100/EC25)
8. Mean percent mortality (\pm standard deviation) after 96 hours in 100% effluent (if applicable)
9. NOEC and values for reference toxicant test(s)
10. IC50 or EC50 value(s) for reference toxicant test(s)

11. Available water quality measurement for each test (e.g. pH, dissolved oxygen, temperature conductivity, hardness, salinity, ammonia)
- B. Compliance Summary: Each self-monitoring report shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include the items listed above under Section A item number 1,3,5,6, 7, and 8.
- C. Reporting Raw Data in Electronic Format: The Discharger shall report all chronic toxicity data for the previous calendar quarter in the format specified in "Suggested Standard Reporting Requirements for Monitoring Chronic Toxicity", February 1993, SWRCB. The data shall be submitted in a high density, double-sided 3.5-inch floppy diskettes, or other electronic format approved by the Executive Officer. Data shall be submitted not later than May 15 and December 15, respectively, of each year.

IV. MISCELLANEOUS REPORTING

- A. The Discharger shall record the rainfall on each day of the month.
- B. The Discharger shall conduct visual observations of the all stormwater discharge locations on at least one storm event per month that produces a significant stormwater discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. "Significant stormwater discharge" is a continuous discharge of stormwater for a minimum of one hour, or an intermittent discharge of stormwater for a minimum of three hours in a 12-hour period.
- C. The Discharger shall retain and submit (when requested) the following information concerning the monitoring program for organic and metallic pollutants.
- a. Description of sample stations, times, and procedures.
 - b. Description of sample containers, storage, and holding time prior to analysis.
 - c. Quality assurance procedures together with any test results for replicate samples, sample blanks, and any quality assurance tests, and the recovery percentages for the internal and surrogate standards.
- D. The Discharger shall submit in the monthly self-monitoring report the metallic & organic test results together with the detection limits (including unidentified peaks). All unidentified (non-Priority Pollutants) peaks detected in the USEPA 624 and 625 test methods shall be identified and semi-quantified. Hydrocarbons detected at $< 10 \mu\text{g/l}$ based on the nearest internal standard may be appropriately grouped and identified together as aliphatic hydrocarbons, aromatic hydrocarbons, and unsaturated hydrocarbons. All other hydrocarbons detected at $> 10 \mu\text{g/l}$ based on the nearest internal standard shall be identified and semi-quantified.
- E. The Discharger shall submit a clear and legible sketch showing the locations of all ponds, treatment facilities, and points of waste discharge. The map shall be updated by the

Discharger as changes occur.

III. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling and analysis shall be that given in Table 1 (Attached).
- B. Sample collection, storage, and analyses shall be performed according to the latest 40 CFR Part 136 or other methods approved and specified by the Executive Officer.

IV. MODIFICATIONS TO PART A

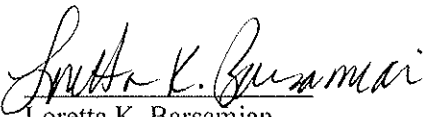
- A. Paragraph D.1.a. shall be modified as follows:

Replace "...on varying days selected at random." with "...as specified in Table 1."

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

- 1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 98-104.
- 2. Is effective on the date shown below.
- 3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger, and revisions will be ordered by the Executive Officer.

October 21, 1998
Effective Date


Loretta K. Barsamian
Executive Officer

Attachment: Table I

TABLE 1

SCHEDULE OF SAMPLING, MEASUREMENT, AND ANALYSIS

<u>Station</u>	<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency of Analysis</u>
I-001	Flow Rate	MGD	Continuous	Monthly
E-001	Flow Rate	MGD	Continuous	Continuous
	COD	mg/l kg/day	Composite	Monthly
	Settleable Matter	ml/l/hr	Grab (1)	Twice/Month
	TSS	mg/l kg/day	Composite	Twice/Month
	Oil & Grease	mg/l kg/day	Grab(1) (4)	Monthly
	Fish Toxicity	Survival	Composite	Monthly(10)
	Chronic Toxicity			Once/Six Months
	pH (2)	Standard Units	Continuous	Continuous
	Temperature	Celsius	Continuous	Continuous
	Turbidity	NTU	Composite	Quarterly
	D.O. (3)	mg/l % Satn	Grab	Monthly
	Arsenic	mg/l kg/day	Composite	Quarterly(11)
	Cadmium	mg/l kg/day	Composite	"
	Chromium (total)	"	"	"
	Copper	"	"	Monthly
	Cyanide	"	"	Quarterly
	Lead	"	"	Monthly
	Mercury	"	"	Quarterly
	Nickel	"	"	"
	Silver	"	"	"
	Selenium (5)	"	"	Quarterly
	Zinc	"	"	Monthly(12)
	Phenols	"	"	Quarterly
	PAHs (6)	"	"	"
	Tributyltin	"	Grab	Once/year
	USEPA 608 (7)	"	Grab	Once/year
	USEPA 624 (8)	"	Grab	Once/year
	USEPA 625 (9)	"	Grab	Once/year
E-002	pH	Standard Units	Grab	Each Occurrence(13)

	Oil & Grease	mg/l	Grab	"
	Visible Oil	--	Observation	"
	Visible Color	--	Observation	"
C-001	pH	Standard Units	Grab	Once/year
	D.O.	mg/l	Grab	Once/year
		% Satn		
	Temperature	°C	Grab	Once/year
	Sulfides	mg/l	Grab	Once/year
	Unionized Ammonia	mg/l	Grab	Once/year
P-1 through P-"n"	All Applicable Observations	--	Observation	Each Occurrence
R-1	Rainfall	--	Observation	Monthly

Footnotes for Table 1:

1. Grab samples shall be collected coincident with samples collected for the analysis of the regulated parameters. In addition, the grab samples must be collected in glass containers.
2. Daily minimum and maximum shall be reported.
3. Receiving water analysis for sulfides should be run when dissolved oxygen is less than 2.0 mg/l.
4. Oil and grease sampling shall consist of 3 grab samples taken at 2 hour intervals during the sampling day, with each grab being collected in a glass container. The entire volume of each sample shall be composed prior to analysis. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.
5. Selenium must be analyzed only by the atomic absorption, gaseous hydride procedure (USEPA method No. 270.3/ Standard Method No. 303E). Alternative methods of analysis must be approved by the Executive Officer.
6. Polynuclear aromatic hydrocarbons (PAHs) shall be analyzed using USEPA Method 610 of the October 1984 Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, 40 CFR Part 136. Alternative methods of analysis must be approved by the Executive Officer.
7. Organochlorine and other Organohalide Pesticides and Polychlorinated Biphenyl Toxic Pollutants shall be analyzed using USEPA Method 608 of the October 1984 Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, 40 CFR Part 136. Alternative methods of analysis must be approved by the Executive Officer.
8. Volatile Organic Toxic Pollutants shall be analyzed using USEPA Method 624 of the October 1984 Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, 40

CFR Part 136. Alternative methods of analysis must be approved by the Executive Officer.

9. Acid and Base/Neutral Extractable Organic Toxic Pollutants shall be analyzed using USEPA Method 625 of the October 1984 Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, 40 CFR Part 136. Alternative methods of analysis must be approved by the Executive Officer.
10. Three-spine stickleback and rainbow trout shall be tested pursuant to Effluent Limitation B.2.1.
11. Arsenic must be analyzed by atomic absorption, gaseous hydride procedure (USEPA method No. 206.3/Standard Method No. 303E). Alternative methods of analysis must be approved by the Executive Officer.
12. Monitoring frequency shall be increased to twice a month whenever the PEP plant is in operation.
13. Each occurrence shall refer to "significant stormwater discharge" on at least one storm event per month. These are continuous discharges of stormwater for a minimum of one hour, or an intermittent discharge of stormwater for a minimum of three hours in a 12-hour period.